UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,913	12/29/2003	Jaroslaw Sydir	Intel-013PUS	1409

7590 02/09/2007	EXAMINER
Daly, Crowley & Mofford, LLP c/o PortfolioIP P.O. Box 52050 Minneapolis, MN 55402	YOUNG, NICOLE M

ART UNIT	PAPER NUMBER
2109	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/749,913	SYDIR ET AL.
	Examiner	Art Unit	
	Nicole M. Young	2109	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 December 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>06/10/2004</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date <u>3/01/2004 and 06/24/2004</u>.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Drawings

The drawings are objected to because:

106b is not shown in Fig. 1 and described in the specification,

150 and 152 in Fig. 2 are labeled as "DES" and described in the specification as

3DES.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

Page 4 line 10, "though which" should read "**through** which"

Page 5 line 14 and last paragraph, every instance of "crypto unit 102" should

read "crypto unit **102a**"

The use of the trademarks "Intel" and "Intel Corporation" have been noted in this

application. It should be capitalized wherever it appears and be accompanied by the

generic terminology.

Although the use of trademarks is permissible in patent applications, the

proprietary nature of the marks should be respected and every effort made to prevent

their use in any manner which might adversely affect their validity as trademarks.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 10-14, 16, and 17 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

Claim 10 does not produce a useful, concrete, and tangible result therefore, it is

non-statutory. **Claims 11-14, 16** and **17** are dependent on claim 10 and do not further

produce a useful, concrete, and tangible result.

Claim Rejections - 35 USC § 102

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 8-29 are rejected under 35 U.S.C. 102(b) as being anticipated

by **Ohta et al. (US 2002/0083317).**

Paragraph [0011] teaches a security communications packet processed by a

network device, which comprises an encryption processing unit and an authentication

processing unit. The packet is first broken into data blocks and stored block by block in

buffers ("data block accumulation units"). When the block size reaches a target size, it is

moved into the encryption processing unit. Then outputted into an authentication buffer

until it reaches a targeted size and moved into the authentication processing unit.

Further information about the target sizes of the data blocks is taught in

paragraph [0016] including differing sizes for the encryption algorithm and

authentication algorithm.

Paragraph [0012] teaches plural cipher processing units and paragraph [0046]

teaches different cipher algorithms used to encrypt/decrypt the data. This would

correspond to the "plurality of processing contexts" in claim 2.

Further information about the types of data is taught in paragraph [0044]

including data to be processed by both the encryption and authentication units, only one

or the other unit, or if the data block needs to be encrypted or decrypted.

Paragraph [0104] teaches multiple encryption and authentication processing

units with multiple data block accumulation units. Also paragraphs [0137] and [0138]

teach a method for processing priority data blocks first. When a high priority data block

needs processing the encryption or authentication buffer saves the lowest priority data

block to the "processing data saving unit." The encryption or authentication processing

unit then processes the high priority data from the data block accumulation unit. After it

is done, it retrieves the data from the processing data saving unit. The processing data

saving unit is interpreted by the Examiner to be a second buffer.

Paragraph [0016] teaches outputting blocks of data to the encryption and

authentication processors in multiples of 8 bits, which would include all processor blocks

in claims 8 and 9.

Paragraph [0056] teaches a plurality of authentication algorithms as in claim 14.

Paragraph [0046] teaches giving packets identification numbers to correspond to

their processing needs as in claim 15.

Paragraph [0045] teaches determining how a packet needs to be processed as in

claim 17.

Paragraph [0089] teaches a router, firewall, and security gate connecting plural

computers. This is equivalent to the hardware devices mentioned in claims 20, 24, and

29.

Figures 8, 9a, and 9b show the processor as a network as in claim 25.

Paragraph [0017] teaches this process as a method as in claim 10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ohta et al. (US 2002/0083317)**, and further in view of **Corder (US 7,069,447).**

Ohta teaches claims 1 and 6 of the current application which claim 7 depends from as shown above. It however, does not teach a connection using a multiplexer device. Ohta teaches connections using a data path connection switching unit as in paragraph [0013].

Corder teaches authentication and encryption buffers and units connected with a multiplexer in column 7 lines 1-21.

In Ohta paragraph [0129] it teaches that the data path connection switching unit is used to provide various paths flexibly combined to fully take advantage of the multiple units. Therefore it would be obvious to one of ordinary skill in the art at the time of invention that this same inherent property of a multiplexer would be an alternate choice.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Candelore et al. (US 6,061,449) discloses a processor with encryption and authentication of data through block buffers. **Hawkes et al. (US 2004/0019783)** discloses authentication of plaintexts and ciphertexts. **US 2004/0019782** discloses fast authentication and encryption of plaintexts and ciphertexts. **Koopman, Jr. et al. (US 5,377,270)** discloses a plurality of encryption and authentication. **Krishna et al. (US 6,971,006)** discloses cryptographic acceleration by the use of varying size IP packets. **Lai (US 2004/0039936)** discloses parallel processing of encryption and authentication.

Mizrah (US 7,073,067) discloses authentication of blocks of bits starting at random

spaces in memory. **Mowery et al. (US 2004/0117642)** discloses processing a plurality

of encryption and authentication techniques. **Platko et al. (US 6,363,444)** discloses

authentication and encryption using a FIFO buffer. **Tardo (US 7,082,534)** discloses

authentication and decryption methods in blocks received where authentication can be

done without having to wait for total decryption of the data. **Intel Corporation** discloses

a network processor that accelerated packet processing for multiple cryptographic

schemes.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nicole M. Young whose telephone number is 571-270-

1382. The examiner can normally be reached on Monday through Friday, alt Fri off,

7:30-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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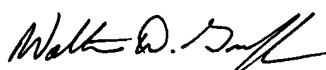
WALTER D. GRIFFIN
SUPERVISORY PATENT EXAMINER